AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. **(Previously presented):** A vesicle for binding a substance, comprising

an artificial membrane having amphiphilic molecules and a pore-forming unit that permits access to the vesicle interior, and

a binding substance for binding a substance to be bound,

wherein the binding substance is disposed in the vesicle interior and is substantially unable to diffuse through the pore formed by the pore-forming unit.

2. **(Previously presented)**: A vesicle according to claim 1, wherein the binding substance is able to form an ionic bond, a hydrogen bridge bond and/or a hydrophobic interaction with said substance to be bound.

3. **(Previously presented):** A vesicle according to claim 1 or 2, wherein the pore unit comprises a protein or fragment thereof, said protein being selected from the group consisting of:

a) a transmembrane protein,

b) a transmembrane protein comprising an alpha-helical transmembrane structure,

c) a transmembrane protein comprising a β-barrel transmembrane structure,

d) a protein structural element of a transmembrane protein, and

e) a protein having a structure that is homologous to a protein structural element of any one of the proteins according to a), b), c) and/or d).

4. (Currently amended): A vesicle according to claim 1 or 2, wherein the pore unit has a[[n]] pore diameter that is greater than 1 nm.

5. (Previously presented): A vesicle according to claim 1 or 2, wherein the pore unit forms an enantioselective pore.

6. (Previously presented): A vesicle according to claim 1 or 2, wherein said binding substance comprises a positively charged oligomer or polymer.

7. (Previously presented): A vesicle according to claim 6, wherein said binding substance comprises poly-lysine.

8. (Previously presented): A method of binding a substance, wherein a substance is contacted with the vesicle of claim 1 or 2.

9. (Previously presented): The method of binding a substance according to claim 8, wherein the substance to be bound is a nucleic acid.

10. (Previously presented): A method of binding a nucleic acid, comprising contacting a nucleic acid with the vesicle of claim 1 or 2.

11. (Previously presented): A method of releasing a nucleic acid, comprising the steps of:

a) binding a nucleic acid in a vesicle by contacting the nucleic acid with the vesicle of claim 1 or 2, and

b) then releasing the bound nucleic acid from the vesicle by applying a shear stress to the vesicle and/or dissolving the vesicle and/or by adding a salt.